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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/125,711	03/04/1999	THOMER SHALIT	097037	8095

7590 05/02/2003

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EXAMINER	
DINH, DUC Q	

ART UNIT	PAPER NUMBER
2674	38

DATE MAILED: 05/02/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/125,711	SHALIT, THOMER	
	Examiner	Art Unit	
	DUC Q DINH	2674	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *14 February 2003* .

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *17-33 and 35-54* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *17-33 and 35-54* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) *33,37* .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

2. Claims 17-23, 25-33, 35-37, 39-45 and 47-54 are rejected under 35 U.S.C. 102(e) as being anticipated by Rohen (5,186,629).

In reference to claims 17 and 30 Rohen discloses FIG. 1 the overall system of the preferred embodiment which includes a computer 11 connected to the mouse housing 17 by a signal line having tactile feedback, which is shown in more detail in FIG. 2 a perspective view of a mouse 17 incorporating a tactile feedback area 33. The feedback to a user is a very mild AC signal. This AC signal is adjustable in both voltage and current so as to give a mild tingling sensation at the fingertip holding the mouse. The sensation is similar to the touching of an electrical appliance having a small leakage current that is seeking a ground return through the persons body (col. 5, lines 12-21). In addition, Rohen discloses in Fig. 3 a conductive area 33 is shown in which a single finger will be in contact with the different voltage potentials of the tactile electrical output of the mouse 17. The conductive area 33 comprises a group of concentric circles separated by insulating space. Circles 35 and 39 are electrically connected to

terminal A and circle 37 and center circle 41 are connected to terminal B. A finger placed onto area 33 will be able to sense the current and voltage between terminals A and B as tactile feedback from the computer (col. 6, lines 11-21). FIG. 4 shows an alternate embodiment of the tactile feedback transducer as a vibrator (movement generator) or tone source which will be made to vary in intensity and/or frequency as the mouse 17 is moved to present different parts of the buffer information to the user (see Fig. 4, col. 6, lines 23-38).

In reference to claims 18-20 and 31-33, Rohen disclose in Fig.4 an alternate embodiment of the tactile feedback transducer as a vibrator or tone source which will be made to vary in intensity and/or frequency as the mouse 17 is moved to present different parts of the buffer information to the user.

In reference to claims 22, 36, Rohen discloses in Fig.2 that the feedback area 33 is in the casing portion of the mouse.

In reference to claims 21, 23, 35 and 37, Rohen discloses in FIG. 5 shows the essential components required to furnish an AC tactile feedback signal from a low DC voltage available from the computer to which the mouse is attached, or from a battery if the mouse has a wireless connection to the computer. The DC voltage source 51 is applied to a switching circuit 53 which changes it to a sequence of pulsations under control of the feedback signal from the computer. The frequency of the pulsations are controlled by the feedback signal. The output of the switching circuit 53 is applied to the primary 55 of a transformer. The ratio of the turns in the

primary winding 55 to the secondary winding 57 of the transformer determines the magnitude of the voltage available at the secondary. Taps 59, 60, and 61 on the secondary allow the magnitude of the voltage to be tailored to the user. Likewise the current limiting resistors 63 and 65 in series with the secondary voltage allow voltage is applied across terminals A and B to drive either the electrical transducer of FIG. 3 or the vibratory transducer of FIG. 4 (col. 6, lines 39-58).

In reference to claims 25-29, 39-42, Rohen discloses in FIG. 8 a selected window contains a listing of applications available and their respective icons. The user enters and explores this window with the mouse. The user determines the window edges by feel and the audio beeps, and identifies the icons and associated text by feeling, clicking, and listening to the vocal responses (col. 8, lines 30-38). In addition, Rohen discloses that the signal defines a frequency indicative of the color of the information being presented. For example, the color red is a lower frequency and blue is a high frequency. This signal is then sent to the mouse 17 where it is applied to the feedback input 52 of the circuits shown in FIG. 5 to actuate the transducer of FIG. 3 or FIG. 4 at the defined frequency (see Fig. 6, lines 17-21).

Claims 43-45 and 47-54 are method claims corresponding to the apparatus claims 17-23, 25-33, 35-37 and 39-42; therefore, are rejected based on the same basis set forth in said claims.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. Claims 24, 38 and 46 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rohen in view Affinito et al. (4,868,549), hereinafter Affinito.

In reference to claims 24, 38 and 46, Rohen discloses everything except the actuator is an electromagnetic actuator. Affinito disclose a feedback mouse using electromagnet (see abstract and Fig.5).

It would have been obvious for one of ordinary skill in the art at the time of the invention was made to provide the electromagnet of Affinito for the feedback 33 of Rohen because it would produce a strong magnetic field which causes increased resistance to further movement of the mouse across the surface (col. 3, lines 45-47).

Response to Arguments

5. Applicant's arguments filed on 12/03/02 and 2/19/03 have been fully considered but they are not persuasive. Applicant argues that in claim 17 and 30, Applicant recited a movement generator... coupled to said housing and other elements. Rohen does not teach, a movement generator ... coupled to the housing. Rohen delivers its tactile feedback directly to a user's finger. The movement generator is not coupled to said housing. However, it clearly shown in Fig.2 that the tactile feedback area 33 is coupled to the housing of the mouse 17, and FIG. 4 shows an alternate embodiment of the tactile feedback transducer as a vibrator (movement

generator) or tone source which will be made to vary in intensity and/or frequency as the mouse 17 is moved to present different parts of the buffer information to the user (see the above rejection). Therefore, the rejection is maintained.

6. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Conclusion

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to **DUC Q DINH** whose telephone number is **(703) 306-5412** The examiner can normally be reached on Mon-Fri from 8:00.AM-4:00.PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, **RICHARD A HJERPE** can be reached on **(703) 305-4709**.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks

Washington, D.C. 20231

Or faxed to:

(703) 872-9314 (for Technology Center 2600 only)

Hand-delivery response should be brought to: Crystal Park II, 2121 Crystal Drive, Arlington, Va Sixth Floor (Receptionist)

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Technology Center 2600 Customer Service Office whose telephone number is (703) 305-4700.

DUC Q DINH
Examiner
Art Unit 2674

DQD
April 29, 2003

RICHARD HJERPE
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600